b) allowing the suspension to settle to yield a supernatant and a sediment comprising high molecular weight hydroxypropylmethylcellulose;

c) discarding the supernatant, and leaving the sediment;

d) resuspending the sediment in a second part of the aqueous solution to form a gel;

e) filtering the gel through a [series] plurality of successively finer filters to remove harmful particulate and gelatinous matter to form a clean solution; and

f) sterilizing the clean solution.

REMARKS

Claims 1-30 are pending in the present application. By her Office Action dated August 3,1999, the Examiner has rejected all claims as being unpatentable under 35 USC § 103 over Hazariwala et al. and Fechner. It is not clear from the Office Action which Fechner reference is being applied against the present application. For purposes of this response, applicant assumes that both Fechner references (BA and BB on sheet 4 of the form 1449) are being referred to by the Examiner.

Both of the Fechner references and the Hazariwala et al. reference disclose low molecular weight, low viscosity hydroxypropylmethylcellulose (HPMC) solutions. That this is so is readily apparent from the cited references themselves. Both of the Fechner references disclose the use of Methocel E 4M to make a 2% solution. The Methocel E 4M material was obtained from Dow Chemical Corporation. As explained in the Dow literature on the Methocel products, the "4M" designation indicates that a 2% solution of this product would have a viscosity of 4,000 cps. See reference AV, Table 1 and reference AW pages 5 and 19 (Table 3). The manufacturer's reported viscosity for solutions made from this

material is confirmed by Fechner who found that the viscosity of a 2% solution in water "was always between 3,500 cp and 5,600 cp." (Reference BB at page 686).

This same material was used by Hazariwala et al. The HPMC solution disclosed in Hazariwala et al. "was prepared according to the method of Kasahara," cited at note 6 to the article. After receiving the current Office Action, applicant, after considerable effort, was successful in locating a copy of the Kasahara brochure in Japan. A copy of that brochure is being submitted herewith in a supplemental information disclosure statement. Once again, it is immediately apparent from the brochure that Methocel E 4M was used to make the HPMC 2% solution. Thus the disclosure of the Kasahara brochure is merely cumulative of Fechner. The shortcomings of such low molecular weight, low viscosity prior art HPMC solutions are described at length in the specification starting at column 3, line 52. They contained "unnecessarily high levels of particulate contamination ...[and] also were not very viscoelastic." Increasing the concentration of the low molecular weight HPMC would only compound the contaminate problem. The specification also recounts the filtration and sterilization difficulties associated with the prior art material. Col. 3, line 65 through Col. 4, line 11. Note, for instance, that the 2% HPMC described by Fechner and Hazariwala et al., even though it was low molecular weight, was filtered under pressure. There was no suggestion that much higher molecular weight material might be effectively filtered.

Nothing in Hazariwala et al. nor the Fechner references suggests or discloses the possibility of a high viscosity (e.g. in excess of 15,000 cps) HPMC solution that is substantially free of harmful particulate matter. Claims 13 and 27 have been amended to impose the same minimum 15,000 cps limitation that is found in claim 1. Support for this limitation may be found at column 5, line 23, and no new matter has been added. Applicant respectfully submits that the claims, as amended, are in no way rendered obvious by the cited art.

The HPMC solutions disclosed in Hazariwala et al. and the Fechner references are the same low molecular weight, low viscosity prior art HPMC solutions discussed at length in the specification. Nothing in those cited references suggests that an

ophthalmically useful high viscosity HPMC solution was even contemplated, much less do they suggest a process for its manufacture. The processes described in Fechner and in the Kasahara brochure cited by Hazariwala et al. involve a straightforward dissolution of the Methocel E 4M in an aqueous solution followed by filtration under pressure and finally sterilization by autoclave. Nothing in these references describes i) the formation of a supernatant to be discarded, ii) the resuspension of the undissolved material, iii) the sequential filtration required to remove the harmful particulate matter, nor iv) the resulting highly purified, high viscosity HPMC solution of the present invention. In order to get the high viscosity HPMC of the present invention, the standard steps of dissolving, filtering and autoclaving will not suffice. Finally, the Examiner has offered no explanation as to how the cited art renders obvious the claims directed to blending different molecular weight HPMC materials (claims 15-18).

For all of the foregoing reasons, and in view of the foregoing amendments, applicant respectfully submits that the rejections have been overcome, and that the claims are now in condition for allowance. The Examiner's favorable reconsideration of the claims is therefore requested.

Respectfully submitted,
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Date: 2/3/00

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